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(21) Application number: 05099241	(71) Applicant: TOSHIBA CORP
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(54) WIRE BREAKAGE DETECTING DEVICE IN
MANIPULATOR JOINT

(57) Abstract:

PURPOSE: To surely check the presence of breakage of a signal wire in accordance with a fed-back signal and to surely specify a broken signal wire by successively supplying a wire breakage detecting current to signal wires for a plurality of units, and by successively feeding back the wire breakage detection current from specific signal wires.

CONSTITUTION: In a manipulator system used for assembling a space station or the like, a wire breakage detecting part 21 composed of a CPU and the like is provided in a control unit 11. In the case of occurrence of erroneous operation of the control unit 11, the operation of a joint mechanism unit 12 comes to a stop so as to set a wire breakage detection mode. Accordingly, a wire breakage detection current is successively applied to signal wires 10₁ to 10_n through the intermediary of buffers 22₁ to 22_n and diodes D1₁ to D1_n, and is

then led to a wire breakage detection wire 23 through diodes D2₁ to D2_n, resistances R1₁ to R1_n and diodes D3₁ to D3_n. Further, it is inputted to first and second comparators 24, 25 in order to compare the same with a set value. In accordance with a result of the comparison, the present of wire breakage among the signal wires 10₁ to 10_n is determined.

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